

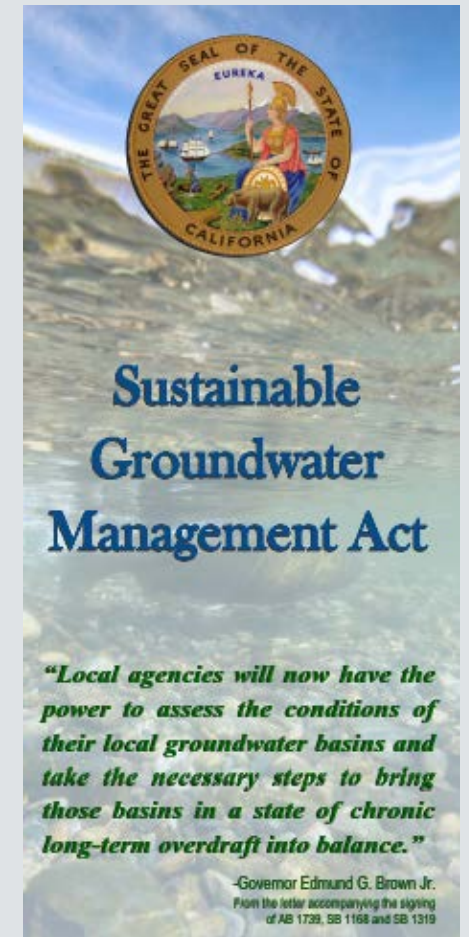


Draft Groundwater Sustainability Plan Overview



SGMA Recap

- SGMA Enacted in 2014
- Establishment of GSAs by June 2017
- GSP Adoption Required by Jan 2020
- Annual Reports due April 1 starting in 2020
- 5-Year GSP Updates
- Reach Groundwater Sustainability by 2040



Steps to Sustainability

June 1, 2016

DWR adopts regulations for evaluating groundwater sustainability plans

June 30, 2017

Groundwater sustainability agencies formed

January 31, 2020

High and medium priority basins in critical overdraft managed by groundwater sustainability plans

January 31, 2022

All high and medium priority basins managed by groundwater sustainability plans

January 31, 2040/2042

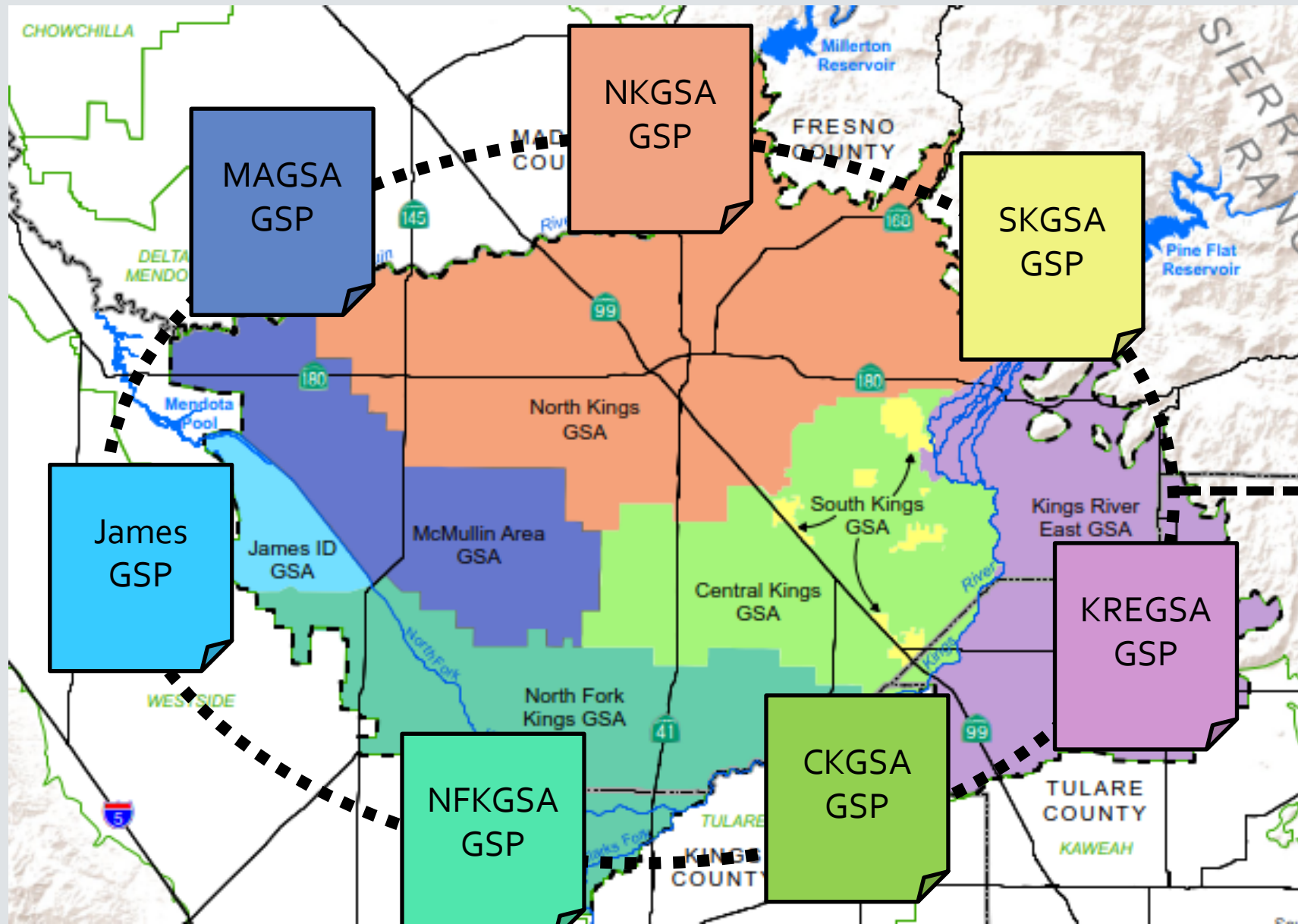
All high and medium priority basins achieve groundwater sustainability (twenty years after plan is adopted)

GSP Goal

Sustainability Goal

The **sustainability goal** of the Kings Basin and this GSA is to ensure that by 2040 the basin is being operated to maintain a reliable water supply for current and future beneficial uses without experiencing undesirable results. This goal will be met by balancing water demand with available water supply to stabilize declining groundwater levels without significantly and unreasonably impacting water quality, land subsidence, or interconnected surface water. The goal of the basin is to correct and end the long-term trend of a declining water table understanding that water levels will fluctuate based on the season, hydrologic cycle, and changing groundwater demands within the basin and its proximity.

Kings Subbasin

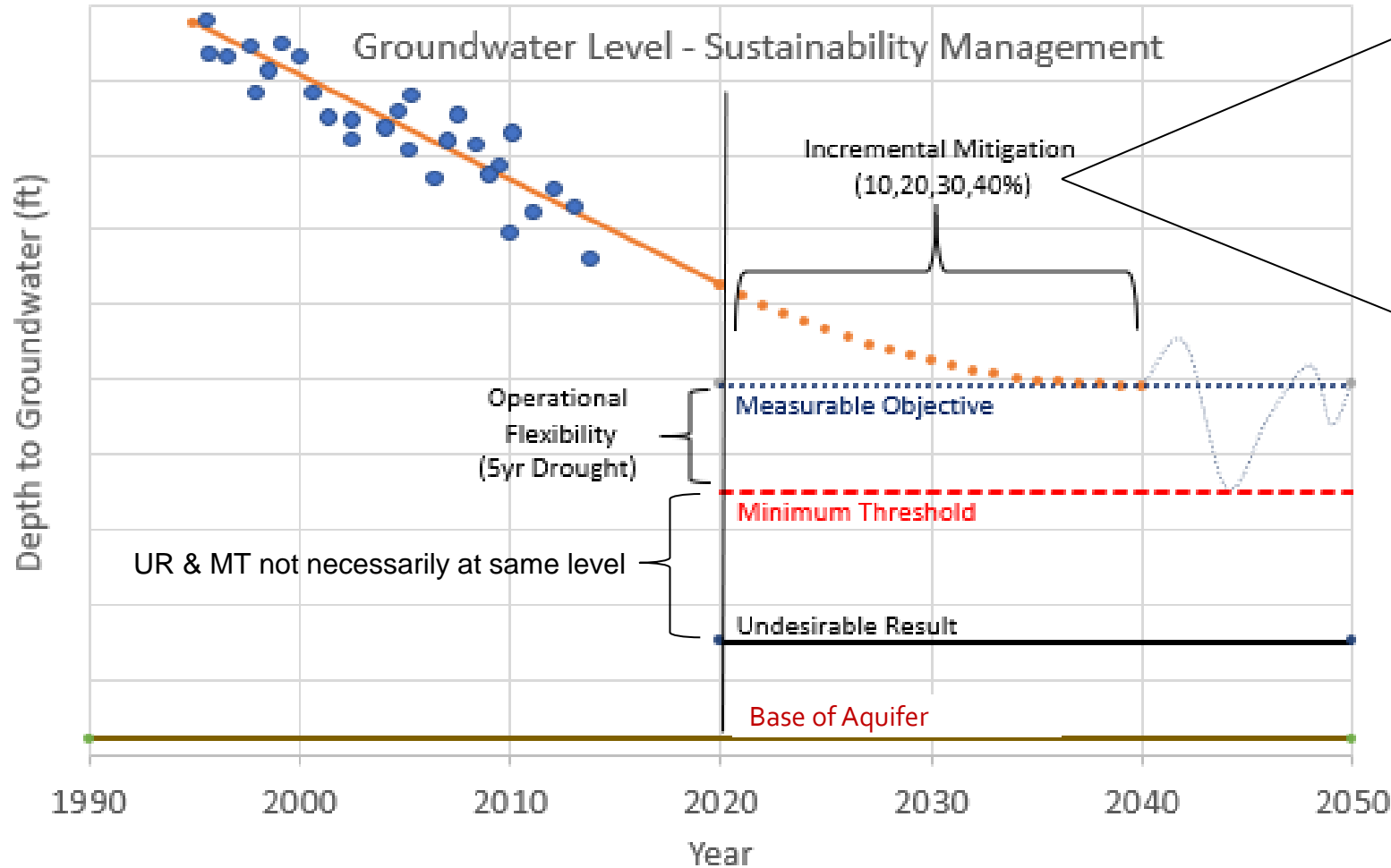


Coord
Agmt



- 7 GSAs
- 7 GSPs
- DWR "Cannot submit until all GSPs uploaded"

Groundwater Levels Objective



Basin Mitigation Schedule

Period	Percent of Overdraft Mitigated	Cumulative Mitigation
2020-2025	10%	10%
2025-2030	20%	30%
2030-2035	30%	60%
2035-2040	40%	100%

Setting MO:

- Hydrograph trendline projected
- Mitigation applied to set MO

Setting MT:

- Drought trendline rate of decline
- Decline rate for 5 years
- Total decline added from MO

GSP Organization

Executive Summary

1 – Introduction

2 – Plan Area

3 – Basin Setting

4 – Sustainable Management Criteria

5 – Monitoring Network

6 – Projects and Management Actions

7 - Implementation



Section 2 – Plan Area

2 – Plan Area

- Describes each agency
- Coordination Agreement

Bakman Water Company

Biola CSD

City of Clovis

City of Fresno

City of Kerman

County of Fresno

Fresno ID

FMFCD

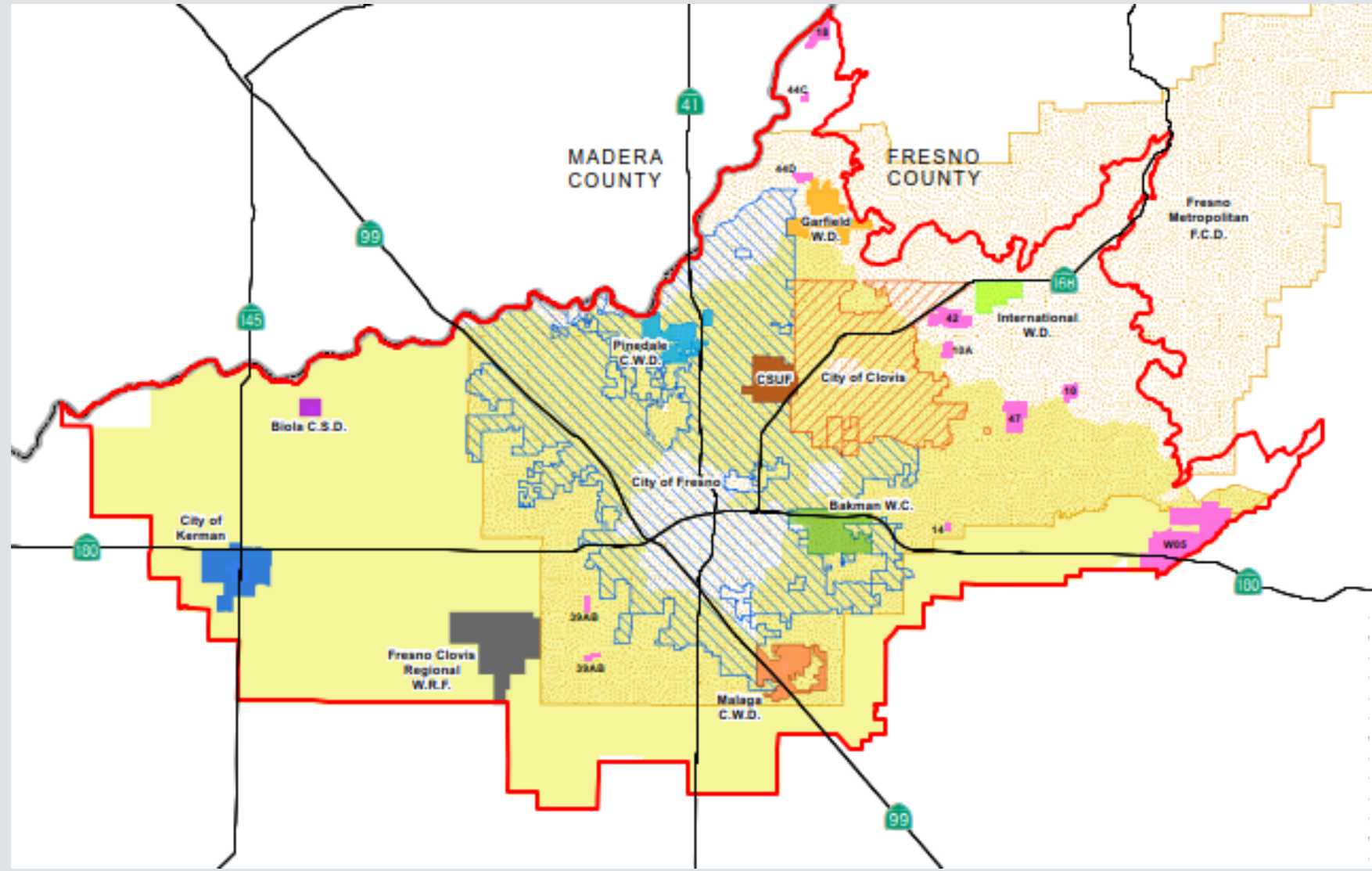
Garfield WD

International WD

Malaga CWD

Pinedale CWD

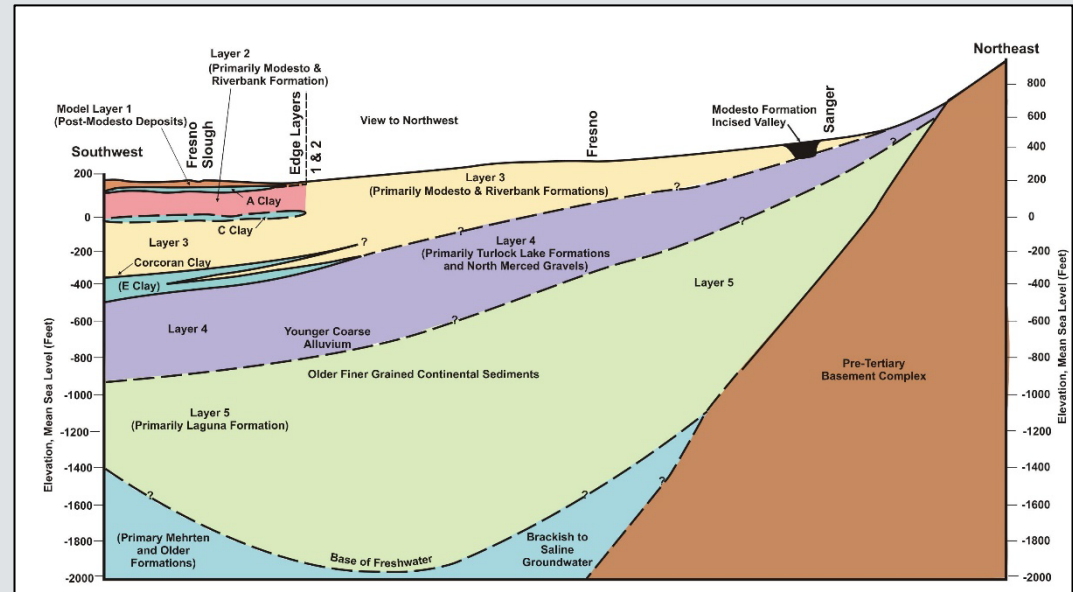
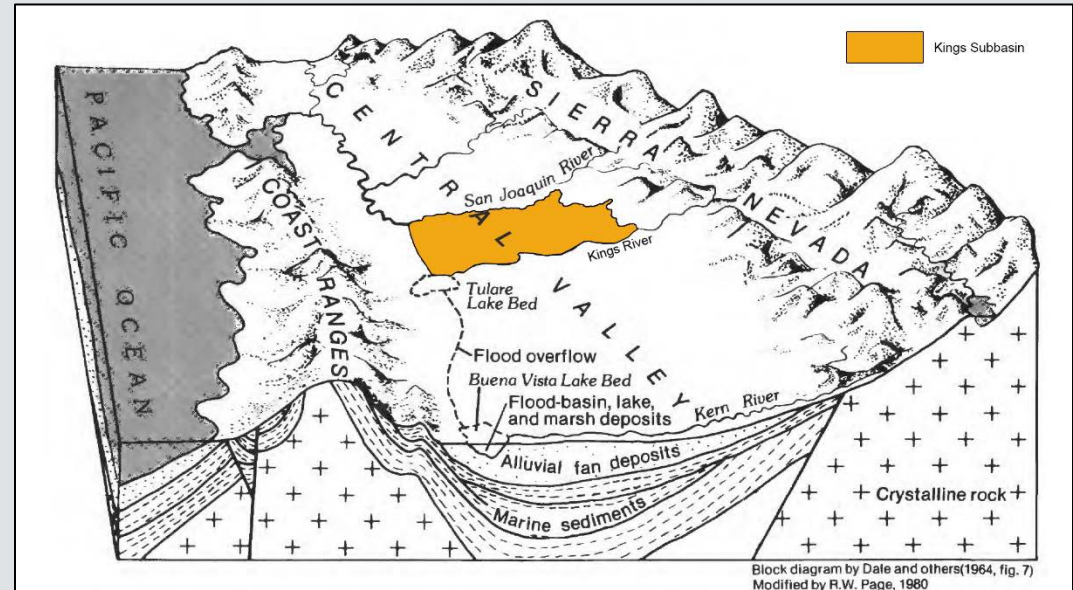
CSUF



Section 3 – Basin Setting

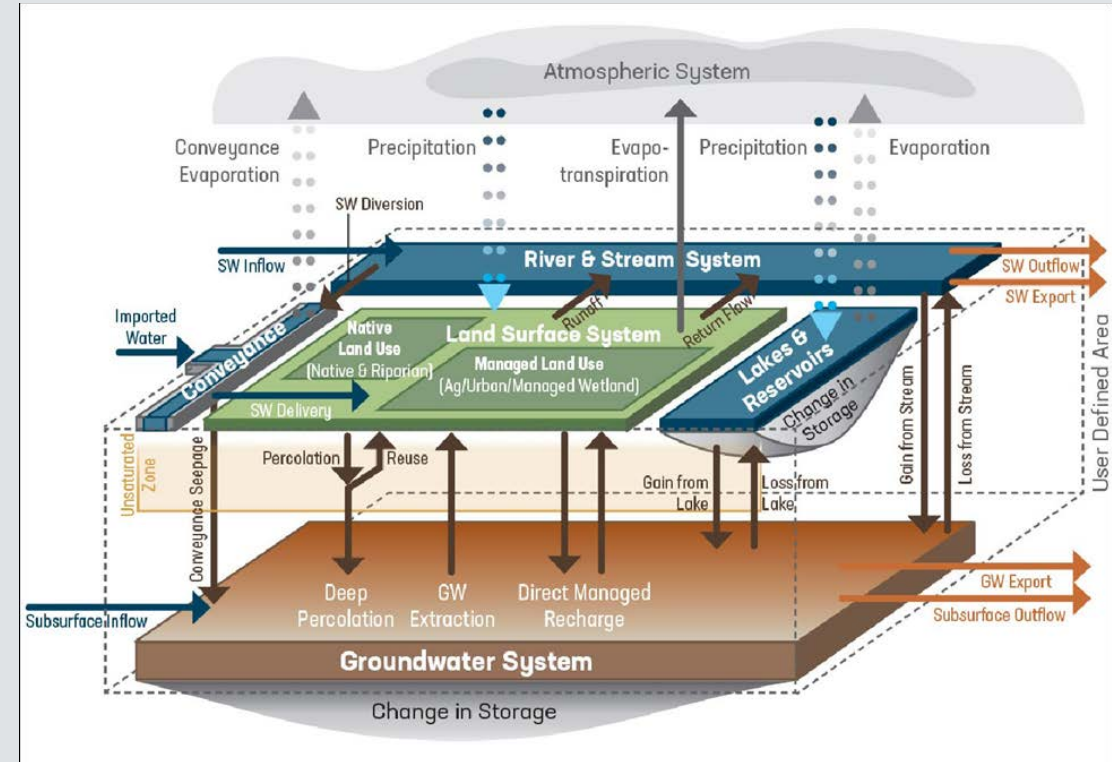
3 – Basin Setting

- Provides Plan Area Background
- Five sections
 - 3.1 Hydrogeologic Conceptual Model
 - 3.2 Groundwater Conditions
 - 3.3 Water Budget
 - 3.4 Water Supply for Augmentation
 - 3.5 Management Areas



Section 3 – Basin Setting

- 3.3 Water Budget
 - Common Approach by all GSAs – Analytical (spreadsheet) Model
 - 4 Water Budgets: Historic (97-11), Current, Future (2040) and 2070
 - Plus Dry, Normal, Wet Years
 - 30 factors – 8 measured, remainder or calculated/estimated
 - Compared to Storage Change estimations
 - Future considers urban growth and climate change



Sections 4 - Sustainable Management Criteria

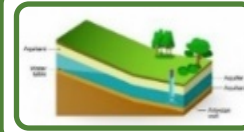
4 – Sustainable Management Criteria

- Sustainable Management Criteria
 - Defined by GSA, coordinated within the Basin
 - Include:
 - Undesirable Results (UR)
 - Minimum Thresholds (MT)
 - Measurable Objectives (MO)

Sustainability Indicators



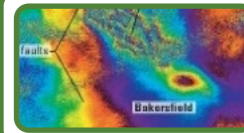
Groundwater Levels



Groundwater Storage



Water Quality



Land Subsidence



Depletion of Interconnected Surface Water



Seawater Intrusion

Section 4 - Groundwater Levels



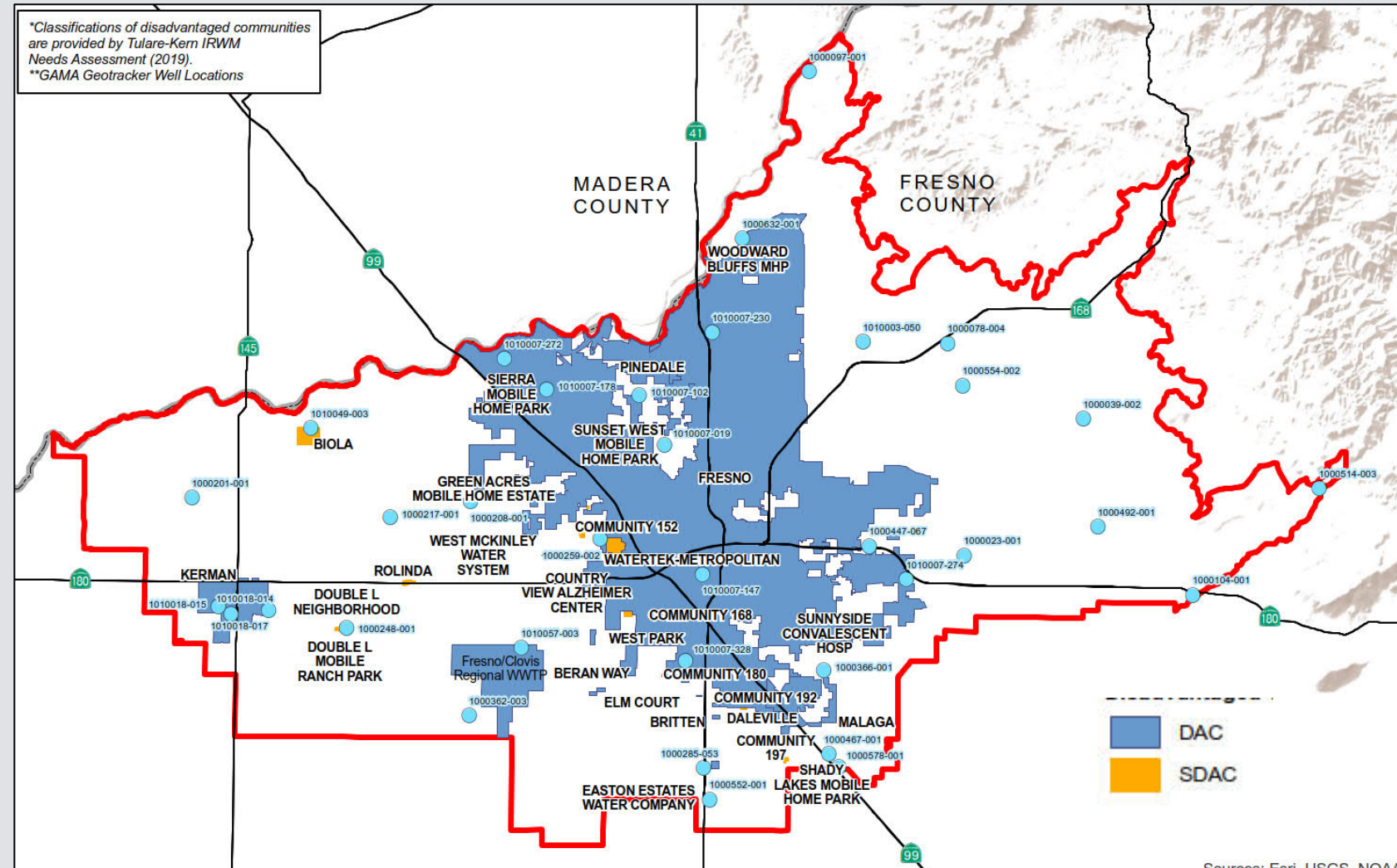
Recognition by GSAs:

- Water levels will continue to decline until the overdraft within the basin and the impact of pumping from neighboring basins has been corrected.
- Water level may decline below the depth of some wells within the basin.
- Well construction has varied and wells have been constructed at varying depths.
- The construction depth of all active wells in the basin is not known at this time.
- Some wells, even recently constructed wells, may have been poorly constructed or constructed too shallow for long-term operation.
- SGMA does not require the GSA to maintain current water levels or prevent any wells from going dry.
- GSA is required to stabilize and correct groundwater decline.
- Until water levels have been stabilized, the GSA does not view a well going dry as an undesirable result.

Groundwater Quality Monitoring in Disadvantaged Communities



- GSA authority focus on groundwater pumping, but are required to monitor quality impacts/changes
- Will review publicly available quality data reported for community and non-community public supply wells
- Representative monitoring network has been established

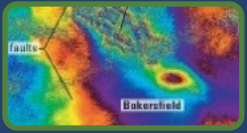


Groundwater Quality - Changes & Actions

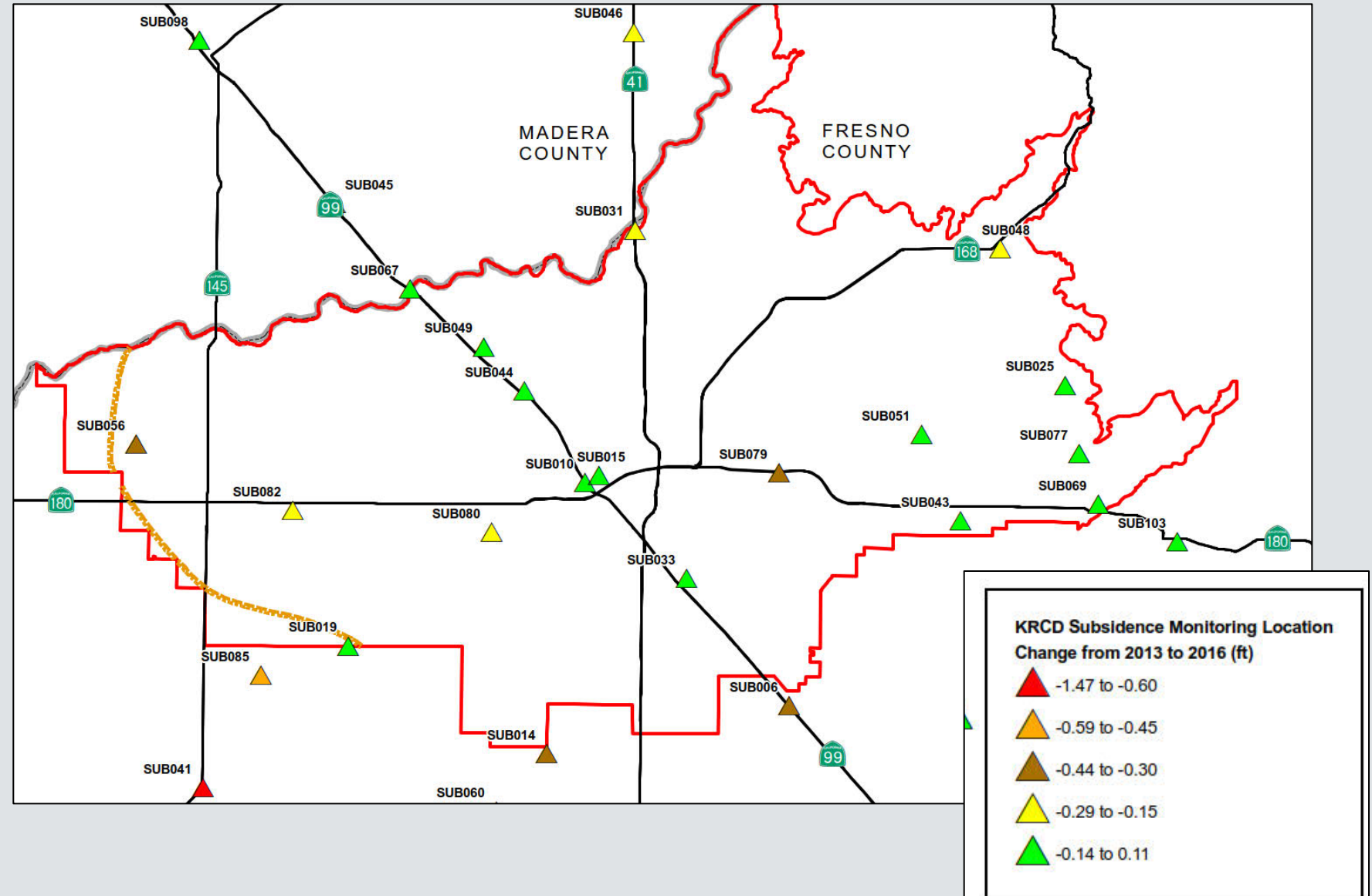


- If an undesirable result occurs with regard to groundwater quality, actions may include:
 - Increased frequency of monitoring well sampling;
 - Additional data analysis;
 - Increased groundwater recharge in the area(s) of concern;
 - Working collaboratively with state and local groundwater quality protection agencies and programs.

Section 4 - Land Subsidence



- NASA, USBR and KRCD data reviewed
- Minimal/No subsidence occurring in the NKGSA area
- KRCD Network will be used for monitoring
- NASA INSAR also to be reviewed

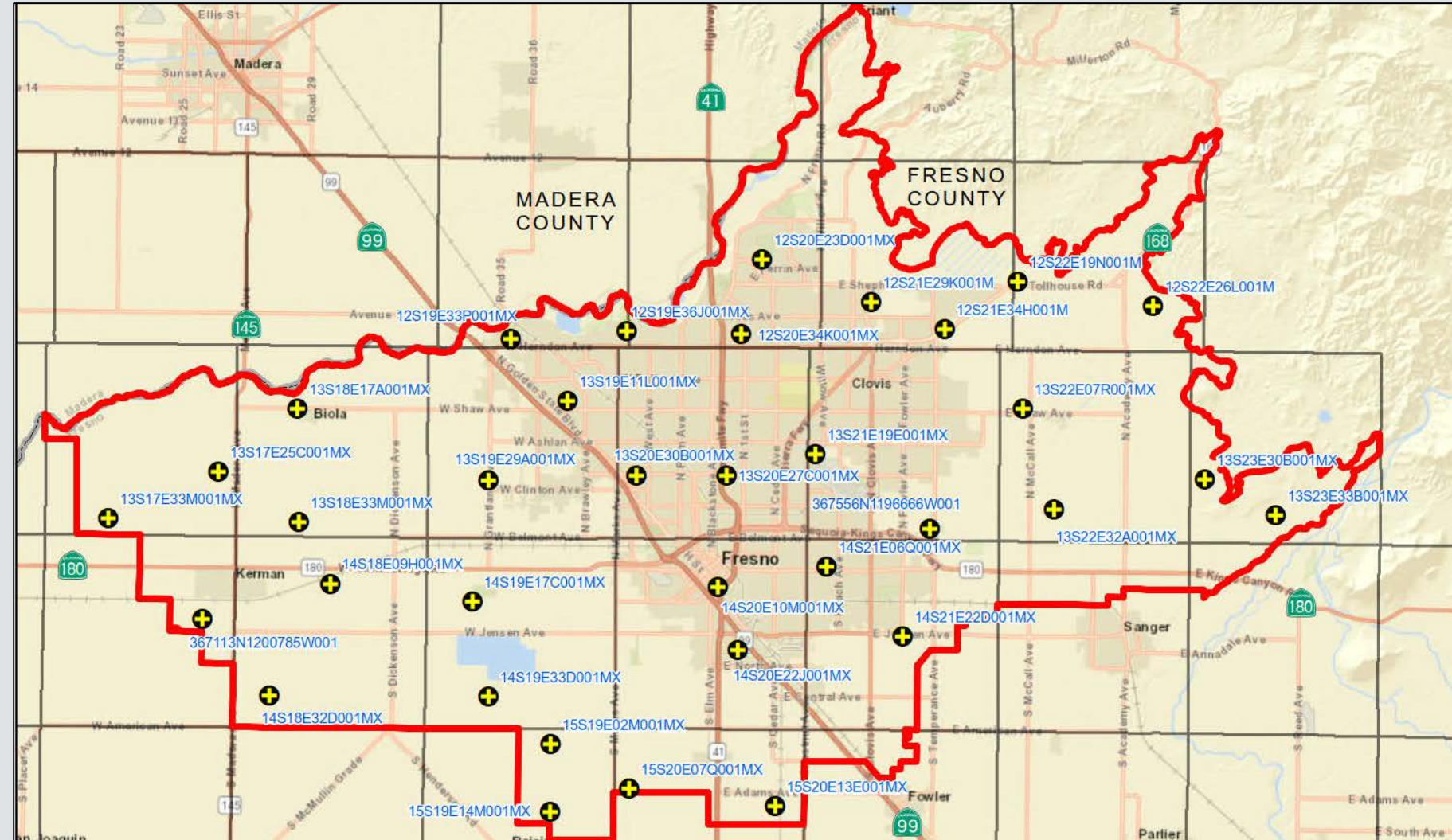


Section 5 - Monitoring Network



5 – Monitoring Network address Sustainability Indicators

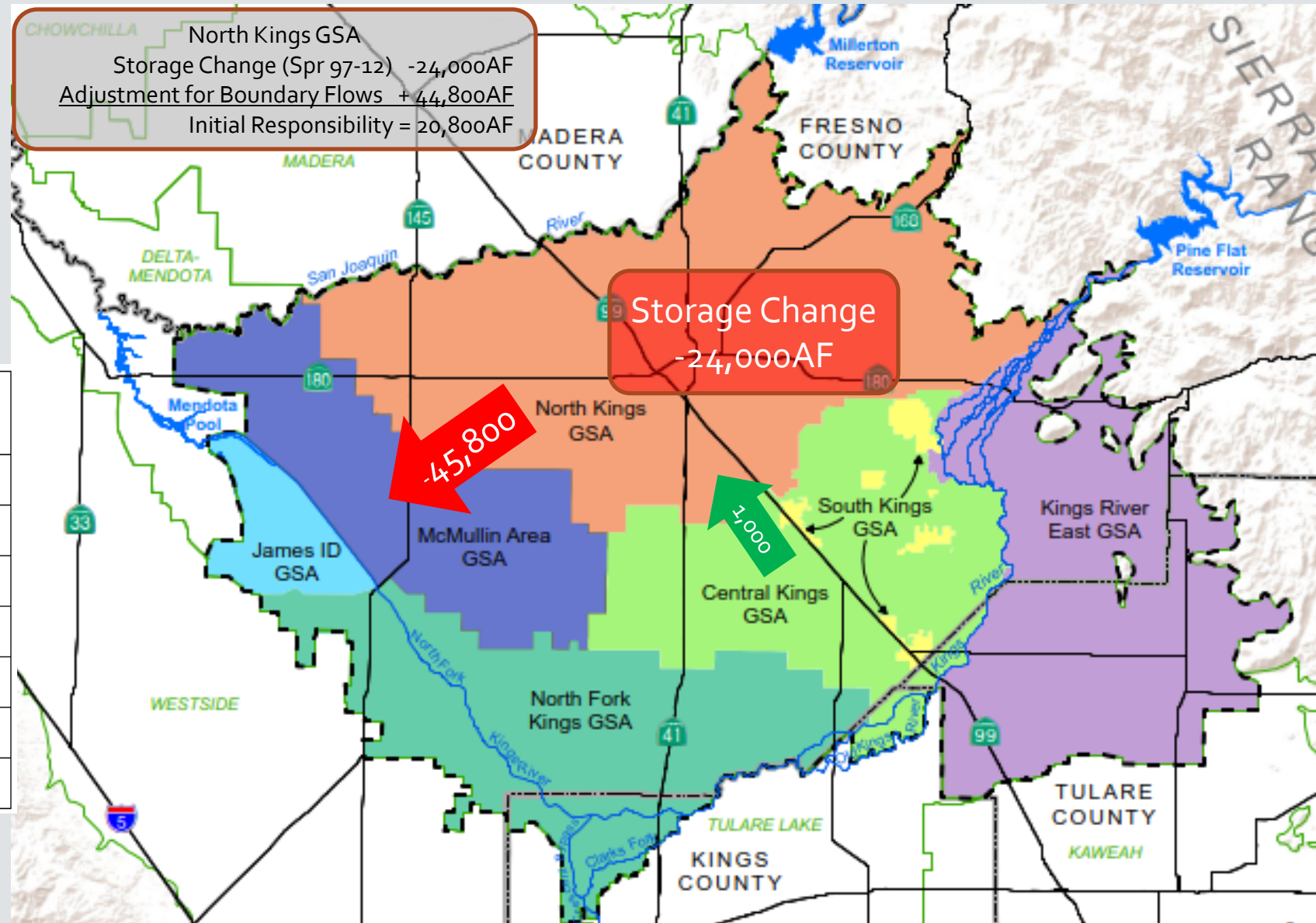
- Representative Monitoring Network
- Wells selected from existing network
- MOs and MTs set at each well



Section 6 - Projects and Management Actions

- Basin Coordination Efforts led to Initial Mitigation Volumes per GSA
- Volumes will be evaluated as more data gathered

GSA	Proposed Initial Responsibility (AF)
Central/South	-7,100
James	16,700
Kings River East	-11,000
McMullin	-91,100
North Fork	-50,300
North Kings	20,800
Total	-122,000



Section 6 - Projects and Management Actions

- Each agency responsible own mitigation (desire to control own destiny)
- Projects implemented by members not GSA
- Need to quantify target (2040) impact/volume to be mitigated
- Identified draft GW Impact methodology that considers positives/negatives by agency
- Tech Com reviewing methodology
- Not required by DWR



NKGSA Project Information

Form date: April 19, 2019

Submitted On June 14, 2019

Project Name Northeast Surface Water Treatment Facility Expansion

GSA Party that Project will Benefit City of Fresno

GSA Party Contact Brock Buche

GSA Party Email brock.buche@fresno.gov

Agency Implementing City of Fresno

Project Description

The NE-SWTF Expansion Project is part of the City's near-term program to attain and maintain the sustainable use of water resources. This project is for the 30-MDG expansion of the existing surface water treatment facility for a total capability of 60-MGD. To enable water from the expansion to reach further into the City large diameter transmission mains will also be constructed. This project will meet future growth demands and ensure groundwater utilization attains and remains at safe-yield levels.

EXPECTED ANNUAL BENEFIT (354.44.b.5)

Acre-feet per year 30,840

Provide a detailed description of how annual benefit was quantified.

Production yield is based on the plant expansion running 335-days per year at a rate of 30-MDG (this is only for the expansion). Actual production may vary on supply availability and other factors.

LOCATION

Township 12

Range 20

Section 13

Latitude 36.8839

Longitude 119.7387

Description Northeast Fresno

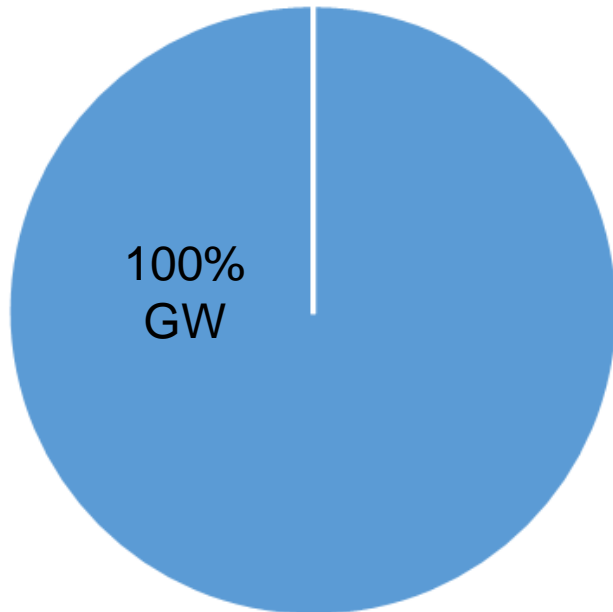
AFFECTED SUSTAINABILITY INDICATOR (354.44b)

Section 6 – City of Fresno Submitted Projects

Project Name	Project Benefit (AFY)	Construction Start Date	Construction Completion Date
1. Residential Meter Installation	43,600	2010	2012
2. T-3 SWTF (4 MGD)	2,210	2011	2013
3. Nielsen Recharge Facility	3,500	2015	2016
4. RWRF – Tertiary Facility (5-MGD)	5,140	2014	2019
5. SE SWTF (80 MGD)	82,240	2015	2018
6. NE SWTF – Expansion (30-MGD EXP; 60-MGD TOTAL)	30,840	2021	2025
7. SE WRF (8-MGD)	8,225	TBD	TBD
Total Benefit	168,405		

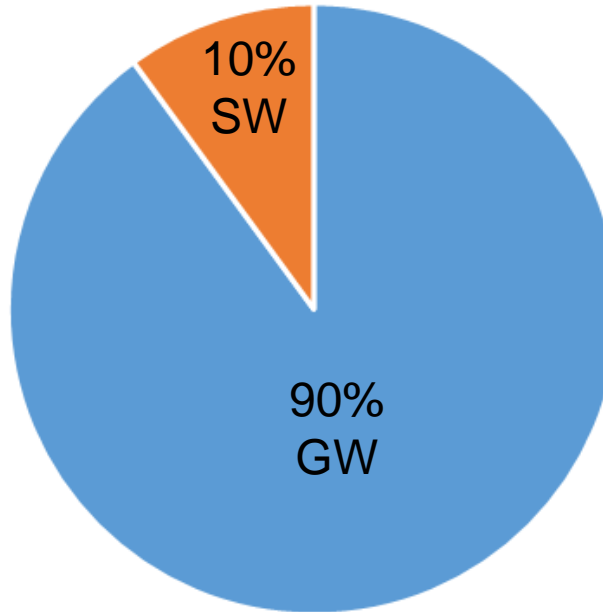
City of Fresno Diversification of Water Supply Portfolio

2003 - 165,177 AF



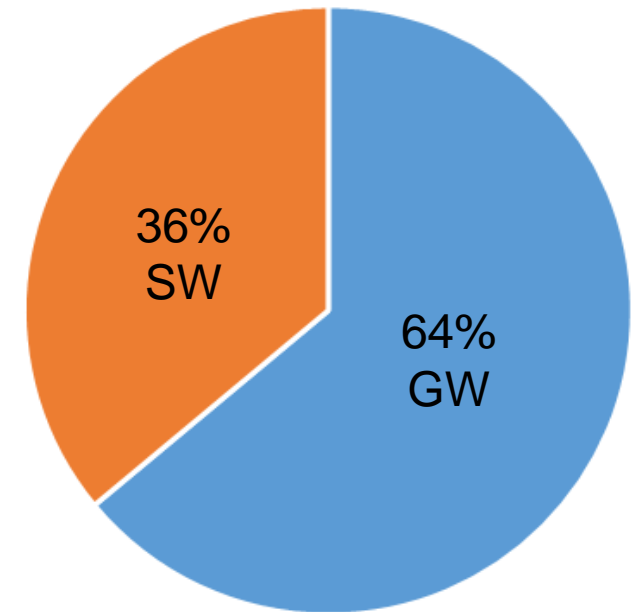
Groundwater = 165,177 AF

2005 - 157,278 AF



Groundwater = 141,471 AF

2018 - 120,067 AF



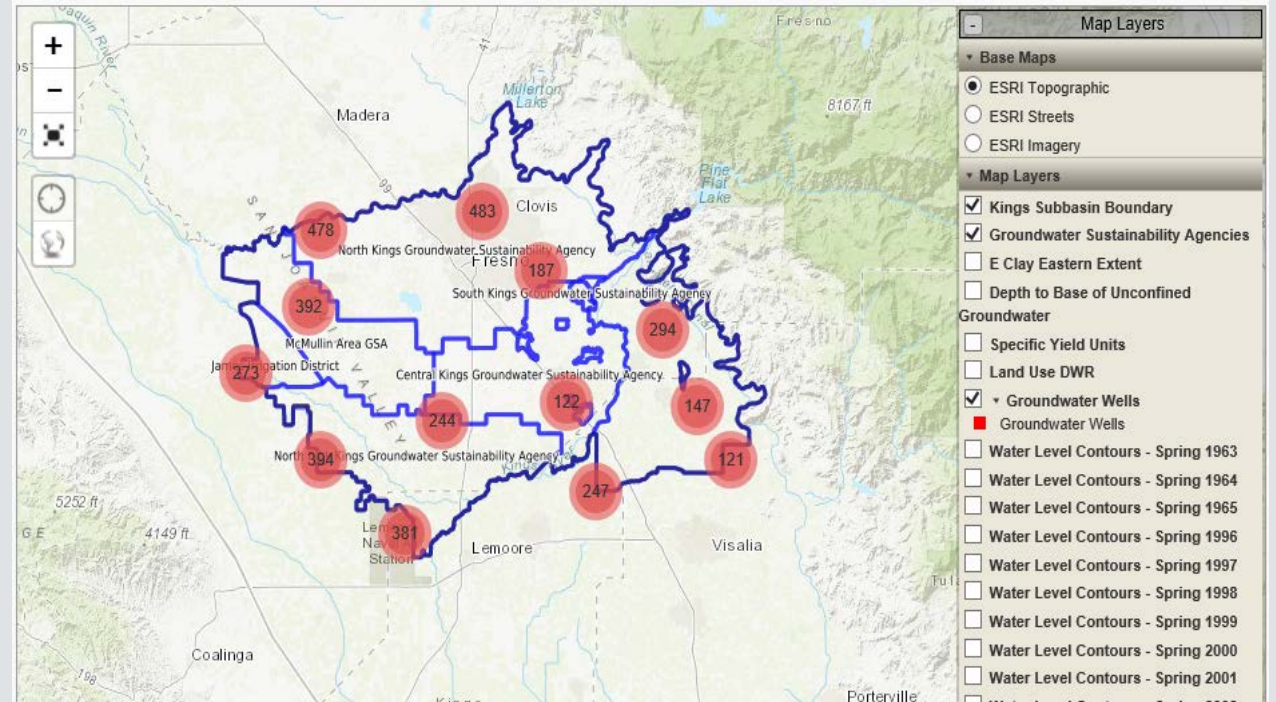
Groundwater = 76,797 AF

Section 6 – Management Actions

- Sustainability is achievable with projects
- GSP does include possible Management Actions not planned for now, but included for future if necessary:
 - Well Head Requirements
 - Groundwater Allocation Per Acre
 - Fees & Incentives
 - Groundwater Pumping Restrictions

Section 7 – Plan Implementation

- Implementation:
 - GSA Ongoing Administrative activities for: data reporting/collecting, outreach, legal, additional monitoring wells and information
 - Project Implementation: Paid for and implemented by each member agency
- Funding: Approved Cost Share from June 2019 Board meeting
- Schedule: Project start/completion date including in Chapter 6. Sorted by 5-yr blocks
- Data Management System (DMS):
 - Coordinated with Basin
 - Limited to required data for DWR
- Annual Reporting:
 - Coordinated with Basin
 - First report due April 2020
 - Outline/format identified



Schedule & Public Outreach

Schedule

Aug. 15	NKGSA Special Board Meeting
Aug. 16	Start 90-day Public Comment Period
Aug. 19	1st Public Notice of Comment Period
Sep. 16	2nd Public Notice of Comment Period
Oct. 18	Deadline for Comments
Oct. 24	Regularly Scheduled Board Meeting
Nov. 21	Public Hearing & Board Meeting GSP Adoption

Outreach

Meetings	37
Emails	11
TV Show/Interviews	5
Discussion Panels	4
Postcard Mailers	3
Public Workshops	2
Interviews	2
Class Presentations	2
Radio	1